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10/765,885	01/29/2004	Nobukazu Suzuki	03500.017861.	2302

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EXAMINER	
ZHU, RICHARD Z	
ART UNIT	PAPER NUMBER
2625	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/765,885	SUZUKI, NOBUKAZU	
	Examiner	Art Unit	
	RICHARD ZHU	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 September 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 15-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 15-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Acknowledgement

1. Acknowledgement is made of applicant's amendment made on 09/07/2010. Applicant's submission has been entered and made of record.

Status of the Claims

2. Claims 1-6 and 15-17 are pending.

Response to Applicant's Arguments

3. **In response to "**Applicant respectfully disagrees. The Office Action appears to contend that one of ordinary skill in the art would have created and displayed thumbnail images of the digitized films images in the prescribed sequence to help a user organize the images on the monitor unit. As discussed above, in Robar et al. the digitized images are delivered to a computer which separates, orients, and sequences the digitized images. Robar et al. notes that one of the advantages of having a computer process the digitized images is that it causes "the method to be insensitive to human error which might result in one or more images being placed out of sequence or in the wrong orientation." (Robar et al. col. 3, lines 28-37). Therefore, Robar et al. teaches away from a user organizing the images and, as a result, from the proffered rationale for combining Robar et and Dow et al**".**

Robar discloses "whereby each DICOM image represents a slice of user defined thickness through the measured dose volume and the separation between slices is also defined by the user" (**Col 7, Rows 60-65**). Here, organizing images is not strictly limited to sequencing the images in a certain order. It also includes defining the separation between slices of DICOM images. Further, ***Robar*** discloses allowing the user to recognize by directly comparing the measured dosage with intended dosage distribution base on displayed DICOM images (**Col 8, Rows 21-35**). Therefore, ***Robar*** does not teach away from the proffered rationale for combining it with ***Dow***.

4. **In response to "**Thus, Robar et al. appears to suggest that the DICOM image has a certain thickness, that is, it is three dimensional. However, Applicant submits that neither Robar et al. nor any of the applied references suggest the desirability of displaying three-dimensional dose distribution data in a two-dimensional thumbnail format**".**

Applicant's contention can not be sustained by knowledge well known to one of ordinary skill in the art dealing with DICOM images. In a background art reference ***Vining et al. (US 6819785 B1)***, therein discloses an apparatus for displaying DICOM images (**Col 2, Rows 5-10 and see Col 4, Rows 38-58**) wherein the images are organized by DICOM series prior to display in 2D and optional 3D, viewer (**Col 4, Rows 15-20**). In fact, ***Vining*** suggests DICOM images can be display as 2D thumbnails (**Col 5, Row 65 – Col 6, Row 5**).

Therefore, one of ordinary skill in the art, for example, a radiologists or a doctor familiar with DICOM systems, would appreciate the need for displaying DICOM as thumbnail in 2D.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-6 and 15-17 are under 35 USC 103 (a) over ***Robar et al. (US 6826313 B2)*** in view of ***Yoshida (US 6178005 B1)*** and ***Dow et al. (US 6784904 B2)*** as well as ***Parulski et al. (US 5414811 A)*** and knowledge well known in the art.

Regarding the system of Claim 15 and therefore method of Claim 1, ***Robar*** discloses a system for reading a plurality of film originals (**Fig 2**), which are placed on an original support of an image reading apparatus (**Fig 2, Flat bed scanner 20 and see Col 6, Rows 7-10, original support being bed of the flatbed scanner**) and for displaying the plurality of film originals on a monitor of a computer connected to the image reading apparatus (**Fig 2, Computer 22 is connected to Flatbed Scanner 20 and has a monitor, images are displayed according to Fig 6**), the system comprising:

an image reader for reading each of the plurality of film originals placed on the original support, identifying a number of frames of film originals simultaneously present on the original support, and for cutting out image areas for each of the frames of film originals to generate a plurality of image signals (**Fig 2, Scanner 20 + Computer 22 and see Col 6, Rows 1-16, simultaneously reading or identifying a plurality of film originals so as to generate the image signals for displaying according to Fig 6**);

a placement orientation detector for detecting placement orientation for each of the film original as to whether it is landscape or portrait, based on edge information of the image signal generated by said image reader (**Col 6, Rows 17-65, software in computer 22 determines the respective orientations of the scanned films by determining edges of respective films in vertical and horizontal positions to extract image areas comprising each of the films**) corresponding to each film original (**Col 6, Rows 27-28, "separately processed"**);

an image signal rotator for rotating the image signal (**Fig 7 and see Col 6, Row 66 – Col 7, Row 8, software in the computer rotates image signal to properly orientations**);

a read image signal display for displaying the plurality of read image signals on one display screen of the monitor unit (**Fig 6 and see Col 6, Rows 10-12, computer 22 as depicted has a monitor and images are displayed according to Fig 6. Obviously if not inherently, the monitor displays the image in accordance to Fig 6**).

Robar does not disclose:

placement orientation detection is perform base on lengths in horizontal and vertical directions of the image signal generated;

rotating image signal to be in a landscape placement when the placement orientation detected is different from landscape placement.

Yoshida discloses a system comprising:

an image reader for reading each of the images of the originals placed on the original support to generate image signals (**Fig 1 and see Col 3, Rows 28-34, reading circuit 10**);

a placement orientation detector for detecting placement orientation of the original as to whether it is landscape or portrait (**Col 5, Rows 6-15, a control circuit 36 incorporating a control program to manage the overall operations of the system to include determining whether received image signal is landscape or portrait; see for example Fig 5, S70 and S82**), based on lengths in horizontal and vertical directions of the image signal generated by said image reader (**Col 5, Rows 39-44 and see for examples Col 6, Rows 17-22 and Rows 64-67, a check to determine size and orientation of the image on the basis of the image signal as described by main scan length and sub-scanning length**);

an image signal rotator for rotating the image signal to be in a landscape placement (**Col 5, Rows 6-15, a control circuit 36 and see Fig 1, Length to Width Conversion Circuit 30, Col 4, Rows 10-18. To rotate an image by 90^{o}**), when the placement orientation of the original detected by said placement orientation detector is different from the landscape placement (**Fig 9, S212 and S214, when it is detected that placement orientation is portrait instead of landscape, S226, the image is length to width converted or rotated by 90^{o} and rotated into landscape placement. See Col 1, Rows 32-35**).

It would've been obvious to one of ordinary skill in the art at the time of the invention to modify the computer 22 of ***Robar*** to perform orientation and rotation such that landscape placement of film images are always generated and displayed in order to provide an image processing apparatus having improved ease of operation (***Yoshida*, Col 2, Rows 10-12**) because it provides a standardized format of orientation placement that is automatically and conveniently reproduced. Further, ***Yoshida*** suggests that the step of placement orientation

and rotation can be perform in a facsimile machine or image reader, it therefore suggest an obvious and predictable arrangement in which image reader can generate the signal in landscape and thereafter transmit it to an external apparatus such as computer 22.

The combination does not suggest that the image is display in thumbnail format.

Dow discloses a system **(Fig 1 A-D)** for displaying image information, wherein when image information of a plurality of originals that is different in its horizontal and vertical lengths placed on an original support is read by an image reading apparatus **(Fig 8C and 8F, the image captured is different in its horizontal length and vertical length)** and said read image is displayed on a display apparatus in a thumbnail display form **(Fig 2, Thumbnail View Module 82 and see Col 7, Rows 7-8)**.

Given the fact that displaying images in thumbnail format on a display is well known and ***Robar***'s explicit requirement that film images be organized in a predetermined sequence **(Col 6, Rows 18-20)**, one of ordinary skill in the art would've modify the computer 22 of ***Robar*** to display thumbnail images in the predetermined sequence to take full advantage of the fact that thumbnails are advantageous in help a user to visually recognizing and organizing images on the monitor unit.

Although the combination does not suggest films are mounted on a mount, in light of applicant's admission that it is well known for a film slide to be mounted on a mount on a scanner **(Page 2, 1st paragraph of applicant specification)**, the examiner is taking official notice of the fact that film mounts are well known and therefore one of ordinary skill in the art would've employed it when simultaneously scanning a plurality of films on a scanner bed.

Lastly, although ***Robar*** does not dictate simultaneously displaying plurality of image signals, however, it predictable teaches the feature and thus the feature is obvious in view of ***Robar*** as asserted by the examiner in the response to applicant's argument section above.

Further, ***Parulski*** discloses an image processing system for displaying digitized images on a screen (**Abstract and see Fig 1, Work Station**) wherein a film scanner reads a plurality of film originals (**Fig 2**) and simultaneously displaying the plurality of image signals representing the film originals on one display screen in landscape displacement (**Figs 6-7**).

One of ordinary skill in the art at the time of the invention would've been motivated to modify ***Robar*** to display either purely digital representation of the plurality of film originals (**Fig 6**) or dosage data that is derived thereof in the format as taught by ***Parulski*** because it gives an operator the flexibility to demand a monitor to display said films in a format most desired by said operator.

Regarding Claims 2-6, the combined teachings do not disclose providing an option to an user to make optionally rotations with respect to orientation. That is, it does not provide an user friendly interface that allows an user to perform various tasks optionally.

Regarding Claim 2, ***Dow*** discloses a method of displaying a read image signal further comprising a display orientation setting step (**Fig 1A, Rotation Button 32**) of setting said predetermined orientation (**Col 7, Rows 60-63**).

Regarding Claim 3, ***Dow*** discloses a method of displaying a plurality of read image signals further comprising

a second image signal rotation step of rotating said plurality of image signals by a predetermined angle (**Col 7, Rows 53-63, activation of rotation button will rotate said image signal by a predetermined angle**) irrespective of the placement orientation detected in said placement orientation detection step (**Col 7, Rows 53-57, the orientation detected in the default state is the placement orientation**), and

a second display orientation setting step of setting whether the images are to be displayed in the orientation aligned with said predetermined orientation or the images rotated by said second image signal rotation step is to be displayed (**If the user chooses to activate rotation button 32, the image that is rotated by 90^{o} relative to the placement orientation will be displayed by display 24**).

Regarding Claim 4, ***Dow*** discloses a method of displaying a read image signal wherein said second display orientation setting step can optionally set to display the image in the orientation detected in the placement orientation detection step (**Col 7, Rows 53-63, the user chooses not to activate the rotate button 32, the image will be displayed in an orientation that is originally detected when the image is initially captured**).

Regarding Claim 5, ***Dow*** discloses a method of displaying a read image signal wherein said second image signal rotation step further includes upon rotating the image signal by the predetermined angle, correcting its little inclination with respect to a vertical or horizontal direction (**Col 7, Rows 53-63, if the user chooses to activate the rotate button 32, the image will be displayed in an orientation that is rotated by a predetermined angle relative to the orientation originally detected when the image is initially captured.**

This is accomplished by correcting the inclination of the image signal with respect to a vertical or horizontal direction).

Regarding Claim 6, ***Dow*** discloses a method of displaying a read image signal wherein in said image reading step, a plurality of originals placed on the original support are read (**scanning a plurality of original is determine by the user in accordance to user defined necessity**) and the other steps are performed on an image signal obtained from each of the originals individually (**Col 7, Row 63 – Col 8, Row 6, other steps includes magnifying, capture, send, delete, attach, detach and etc**).

Given the advantages of ***Dow***'s Device, it would've been obvious to one of ordinary skill in the art at the time of the invention to modify the display interface of the combined teachings to include features of ***Dow*** as cited in Claims 2-6 whereas the motivation would've been to presents a novel user interface which makes the menu/image navigation user interface and method a solution in devices with limited resources which need to be able to navigate among multiple images arranged in different orientations (***Dow*****, Abstract**).

Regarding Claims 16-17, ***Robar*** discloses wherein the plurality of image signals displayed on the monitor unit are images of the plurality of film originals in dosage representation (**Col 7, Rows 53-61**)

Parulski suggest wherein the plurality of image signals displayed on the monitor unit are images of the plurality of film originals (**Figs 5-8**).

Thus, the combination would predictably result in simultaneously displaying the films as is without DICOMM manipulation according to Fig 6 of ***Robar*** or with DICOMM manipulation.

Conclusion

7. **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Richard Z. Zhu whose telephone number is 571-270-1587 or examiner's supervisor King Y. Poon whose telephone number is 571-272-7440. Examiner Richard Zhu can normally be reached on Monday through Thursday, 0630 - 1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or

access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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